

- nucleotide sequence included in a nucleic acid of SEQ ID Nos NOs: 1 or 3, a fragment or a variant thereof and a complementary sequence thereto; and
- b) optionally, the reagents necessary for performing the hybridization reaction.

Please substitute the following paragraph on page 53, beginning at line 9:

[0161] The term "PAPAP polypeptides" is used herein to embrace all of the proteins and polypeptides of the present invention. Also forming part of the invention are polypeptides encoded by the polynucleotides of the invention, as well as fusion polypeptides comprising such polypeptides. The invention embodies PAPAP proteins from humans, including isolated or purified PAPAP proteins consisting of, consisting essentially of, or comprising the sequence of SEQ ID No NO: 2.

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Please substitute the following paragraphs on page 53, beginning at line ²³15 through to page 55, line 5:

[0163] The invention concerns the polypeptide encoded by a nucleotide sequence of SEQ ID No NO: 1 or 3, or a complementary sequence thereto or a fragment thereof.

[0164] The present invention embodies isolated, purified, and recombinant polypeptides comprising a contiguous span of at least 6 amino acids, preferably at least 8 to 10 amino acids, more preferably at least 12, 15, 20, 25, 30, 40, 50, or 100 amino acids of SEQ ID No NO: 2. In other preferred embodiments the contiguous stretch of amino acids comprises the site of a mutation or functional mutation, including a deletion, addition, swap or truncation of the amino acids in the PAPAP protein sequence.

[0165] The invention also encompasses purified, isolated, or recombinant polypeptides comprising an amino acid sequence having at least 70, 75, 80, 85, 90, 95, 98 or 99% amino acid identity with the amino acid sequence of SEQ ID No NO: 2 or a fragment thereof. The variant polypeptides are included in the present invention regardless of whether they have their normal biological activity. This is because even where a particular polypeptide molecule does not have biological activity, one of skill in the art would still know how to use the polypeptide, for instance, as a vaccine or to generate antibodies. Other uses of the polypeptides of the present invention that do not have PAPAP activity include, inter alia, as epitope tags, in epitope mapping, and as molecular

test compound can then be selected according to its ability to ameliorate said schizophrenia-related or bipolar disorder-related endpoints. PAPAP activity may be provided by any suitable method, including but not limited to providing a vector containing a PAPAP nucleotide sequence, treating said animal with a compound capable of increasing PAPAP expression and treating said cell with a PAPAP peptide. Preferably, said animal is treated with a PAPAP peptide comprising a contiguous span of at least 4, 6 or preferably 8 ~~contiguous~~ contiguous amino acids of SEQ ID ~~Nos.~~ NOs: 2. Preferably the test compound is a compound capable of or suspected to be capable of ameliorating a symptom of schizophrenia, bipolar disorder or a related disorder; alternatively, the test compound is suspected of exacerbating a symptom of schizophrenia, bipolar disorder or a related disorder. A test compound capable of ameliorating any detectable symptom or endpoint of a schizophrenia, bipolar disorder or a related disorder may be selected for use in developing medicaments.

Please substitute the following paragraphs on page 101, beginning at line 5:

[0309] As an illustrative example, to study the interaction of the PAPAP protein, or a fragment comprising a contiguous span of at least 6 amino acids, preferably at least 8 to 10 amino acids, more preferably at least 12, 15, 20, 25, 30, 40, 50, or 100 amino acids of SEQ ID ~~No~~ NO: 2, with drugs or small molecules, such as molecules generated through combinatorial chemistry approaches, the microdialysis coupled to HPLC method described by Wang *et al.* (1997) or the affinity capillary electrophoresis method described by Bush *et al.* (1997), the disclosures of which are incorporated by reference, can be used.

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[0311] In further methods, peptides, drugs, fatty acids, lipoproteins, or small molecules which interact with the PAPAP protein, or a fragment comprising a contiguous span of at least 6 amino acids, preferably at least 8 to 10 amino acids, more preferably at least 12, 15, 20, 25, 30, 40, 50, or 100 amino acids of SEQ ID ~~No~~ NO: 2, may be identified using assays such as the following. The molecule to be tested for binding is labeled with a detectable label, such as a fluorescent, radioactive, or enzymatic tag and placed in contact with immobilized PAPAP protein, or a fragment thereof under conditions which permit specific binding to occur. After removal of non-specifically bound molecules, bound molecules are detected using appropriate means.